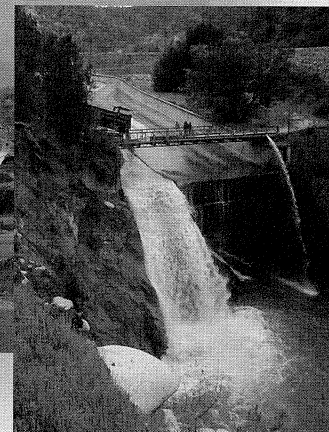
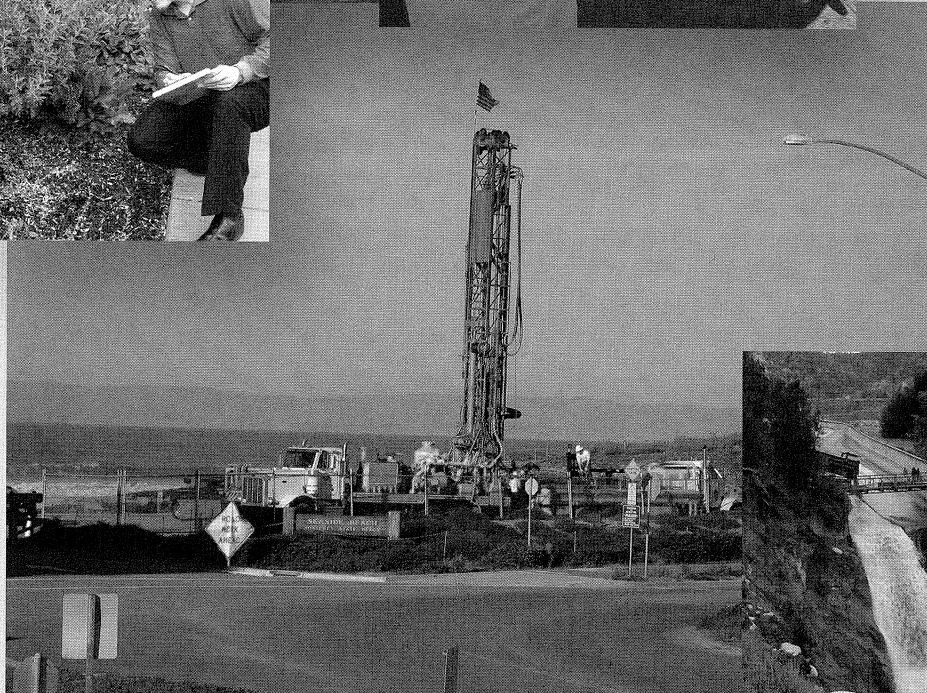
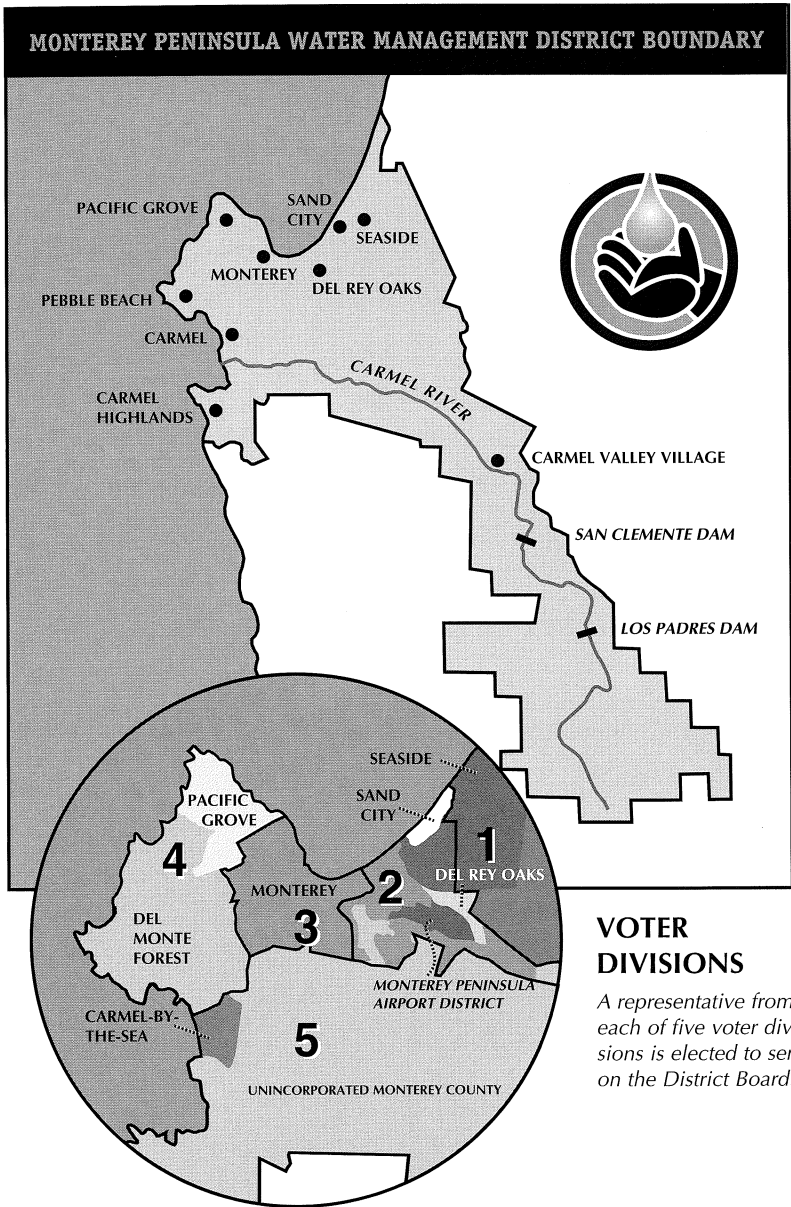




**MONTEREY
PENINSULA
WATER
MANAGEMENT
DISTRICT**





Mission Statement

The mission of the Monterey Peninsula Water Management District is to manage, augment and protect water resources for the benefit of the community and the environment.

2003 Board of Directors

Alexander "Zan" Henson, Chair – Division 5
 Judi Lehman, Vice-Chair – Division 2
 Alvin Edwards – Division 1
 Molly Erickson – Division 3
 Kris Lindstrom – Division 4
 David Potter – Monterey County Board of Supervisors
 David Pendergrass – Mayoral Representative

Elected in November 2003

Kristi Markey – Division 3
 Michelle Knight – Division 4
 Larry Foy – Division 5

District Management

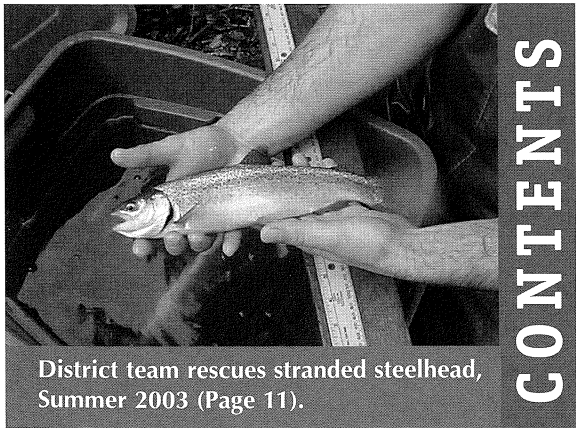
Fran Farina – General Manager
 Rick L. Dickhaut – Administrative Services Manager
 Andrew M. Bell – Planning & Engineering Manager
 Stephanie Pintar – Water Demand Manager
 Joseph W. Oliver – Water Resources Manager

New Voter Division Boundary Map

A new voter division boundary map approved in July, 2002 was in effect for the November 2003 Board member elections. The redistricting effort was prompted by state and federal laws that mandated a review of voter division boundaries based on the 2000 census results. The District first established election of directors by voter division in 1993.

COVER PHOTOS

Highlights of MPWMD 2003 accomplishments. See various articles within for more information.



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OVERVIEW

Managing the increasing demands on the limited resources of water within the District, and exploring options for augmenting the water supply while protecting the environment, are the challenges faced by the Board and staff of the Monterey Peninsula Water Management District.

The Monterey Peninsula Water Management District

The Monterey Peninsula Water Management District (the District) manages 40 water distribution systems and over 900 private wells that derive their supply from sources within the District. Most users are supplied from sources in the Monterey Peninsula Water Resources System (MPWRS), which consists of the Carmel River, its tributaries, the Carmel River Alluvial Aquifer and the Seaside Coastal Subareas. The largest water distributor, California American Water (Cal-Am), provides water to 95 percent of the customers and produces about 80 percent of the total supply within the District. The State Water Resources Control Board (SWRCB) regulates most of Cal-Am's water production. The District regulates other water suppliers within its jurisdiction, which operate under varying rules and conditions.

Board Investigates Options For Increasing the Water Supply Within the District

The Board's priority is to increase the water supply within the District, while protecting the environment. Alternatives evaluated during 2003 included:

- An 8,400 acre-feet-per-year (AFY) desalination project in Sand City;
- Cal-Am's proposed Coastal Water Project (CWP), which includes a 9,400 (AFY) desalination plant at Moss Landing;
- Storm water reuse for irrigation and other non-potable uses;
- Capturing excess winter flow from the Carmel River and redirecting it to the Seaside Basin (aquifer storage and recovery [ASR]); and
- Reclaiming wastewater to use for irrigation.

State Requires Cal-Am to Reduce Water Pumped from the Carmel River

Water production within the District remains under careful scrutiny since the SWRCB issued Order 95-10 in 1995. Order 95-10 required Cal-Am to reduce the water pumped from the Carmel River by 20 percent and up to 75 percent in the future, if no action is taken to replace unlawful diversions. Any new water developed by Cal-Am must first completely offset the unlawful diversions from the Carmel River (10,730 acre-feet), before any water is allocated for new construction or remodels. The District and Cal-Am have cooperated to develop innovative water conservation measures to keep water use within established limits. The District has also limited the amount of water available for new building and remodel projects within the Cal-Am service area.

Protecting the Environment Remains A Priority for the District

The District's comprehensive mitigation program provides a solid environmental baseline and understanding of the relationships between weather, hydrology, human activities and the environment. This knowledge enables decision-makers to further the District's mission of benefiting both the community and the environment.

The District uses this knowledge and enhanced conservation measures to protect the Carmel River habitat and threatened species, such as the California red-legged frog and Carmel River steelhead. Whereas only 15 adult steelhead were counted in 1992 at San Clemente Dam, 483 adults were counted between



Top: The Spawning Gravel Injection Project (See Page 11).

Bottom: Drought-tolerant plants (See Page 9).

December 2002 and May 2003. In addition, the levels of juvenile steelhead are now typical of well-seeded steelhead streams in California. The staff regularly assesses the quantity and quality of groundwater in the Seaside and Carmel River basins, monitors stream flow and measures the effect on the flora and fauna in and around the basins.

District Promotes Conservation

Monterey Peninsula remains one of the most water-thrifty communities in the state. District staff uses the most efficient irrigation technology and native plants in restoration projects along the Carmel River corridor. The District and Cal-Am provide incentives to replace inefficient plumbing fixtures and information on drought-tolerant gardens.

INCREASING THE WATER SUPPLY

Identifying and evaluating options that can increase the water supply within the District without impacting the environment, continues to be a high District priority.

Seaside Basin Aquifer Storage and Recovery (ASR) Project Tested

The Seaside Basin Aquifer Storage and Recovery Project, also known as the Seaside Basin Injection/Recovery Program, would divert excess winter flows from the Carmel River Basin to the Seaside Ground Water Basin, a distance of about six miles. This water would then be injected into the Seaside Basin by specially-constructed ASR wells for use during summer and extended dry periods. The diverted water would be treated before it is injected into the basin to comply with agency regulations. The District has been testing and developing the ASR proposal since 1996.

All three phases of the project: injection, storage and recovery of water using the District's well on former Fort Ord, were tested successfully in 2003.

- Water was diverted from the Carmel River Basin between January and May, treated, then injected into the Seaside Basin using the test well where it was stored for three months, then recovered between September and early November. A total of 440 AF was recovered, which included water injected in previous years.

- Water quality tests indicate that the recovered water was a blend of Carmel

River system water and Seaside Basin water. This intermixing is likely the result of natural ground water inflow from inland areas combined with nearby well pumping.

- The recovered water retained some chemical imprints of the Carmel River system water even after 100% of the injected volume was removed. This sug-

can reduce water treatment costs.

Seaside Basin Ground Water Management Plan

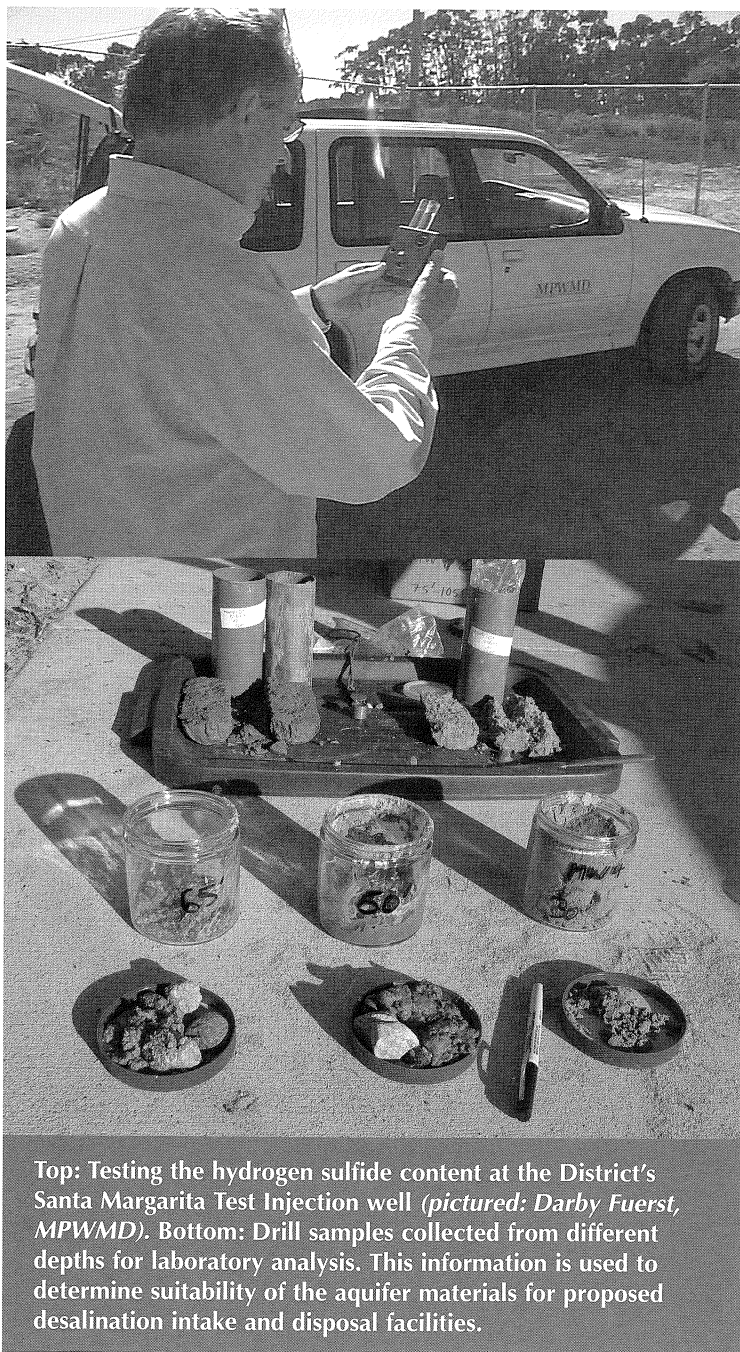
Since Cal-Am reduced pumping from the Carmel River system in order to comply with SWRCB Order 95-10, Cal-Am increased pumping from the Seaside Basin, which has begun to exhibit signs of stress from over-pumping. Therefore, the District Board identified the need to manage the Basin proactively:

- The Board requested that interim ordinances be prepared to manage the Basin's resources until a comprehensive management plan is developed and adopted;
- The District convened a group of Basin stakeholders to review proposed interim ordinances;
- District staff completed a Notice of Preparation and held public workshops for an Environmental Impact Report (EIR) to document impacts associated with the proposed ordinances; and
- Staff prepared draft documents to support the proposed EIR.

However, Cal-Am filed a complaint in the Monterey Superior court against Basin water users in August 2003 and requested adjudication of water rights in the Basin. The District filed a motion to intervene in the lawsuit, which the court granted. In December 2003, the District Board decided not to proceed with efforts on the interim ordinances and the proposed EIR, but rather to focus on development of a Ground Water Management Plan for the Basin.

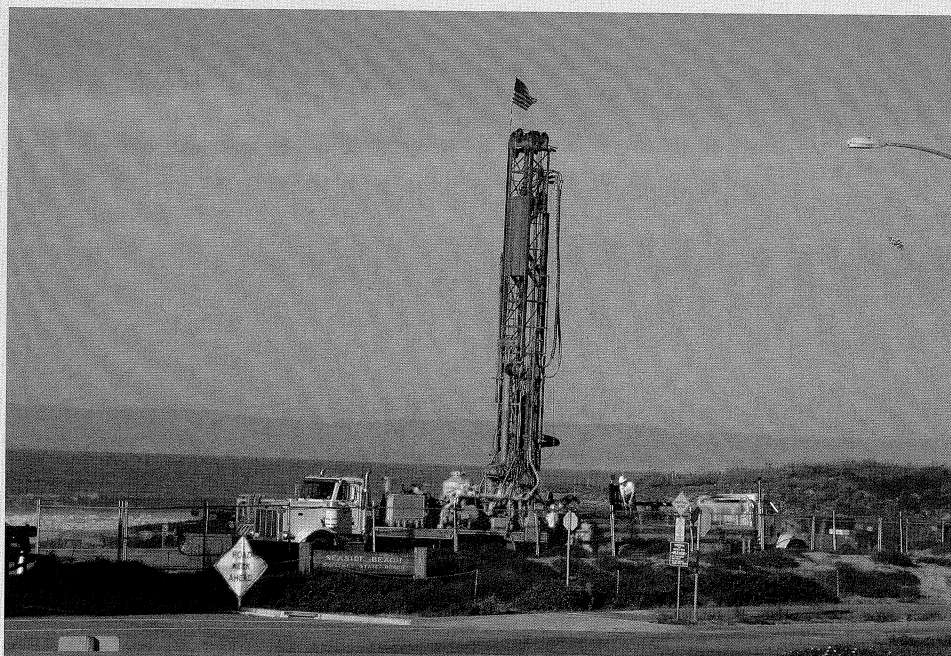
Draft Environmental Impact Report for the Water Supply Project in Board Review

The Draft Environmental Impact Report for the District's comprehensive Water



Top: Testing the hydrogen sulfide content at the District's Santa Margarita Test Injection well (pictured: Darby Fuerst, MPWMD). **Bottom:** Drill samples collected from different depths for laboratory analysis. This information is used to determine suitability of the aquifer materials for proposed desalination intake and disposal facilities.

gests that the injection of Carmel River water is capable of "conditioning" the aquifer in the injection area. The Carmel River water decreased the amount of hydrogen sulfide in the native ground water, which is an ancillary benefit that



Drilling at Monterey State Beach parking lot, installing monitor well to collect data on aquifer characteristics and the suitability for proposed desalination techniques.

Supply Project evaluated various proposals to augment the water supply within the District. The water supply options studied include:

- An 8,400 AFY desalination project in Sand City at the project level of detail;
- Cal-Am's proposed Coastal Water Project (CWP), which includes a 9,400 AFY desalination plant at Moss Landing combined with the Seaside Basin ASR to contribute another 1,300 AFY;
- Seaside Basin ASR in conjunction with the desalination plant in Sand City;
- Storm water reuse for irrigation and other non potable uses;
- Cal-Am's proposed Carmel River Dam and Reservoir Project; and
- No Project alternative.

The Board also authorized consultants to obtain necessary permits to conduct geotechnical (test wells) and geophysical (depth soundings) investigations to better characterize the coastal dune aquifer. This information will help determine the feasibility of using the horizontal direc-

tional drilling (HDD) "slant well" technique for seawater intake and brine discharge for the proposed Sand City desalination project.

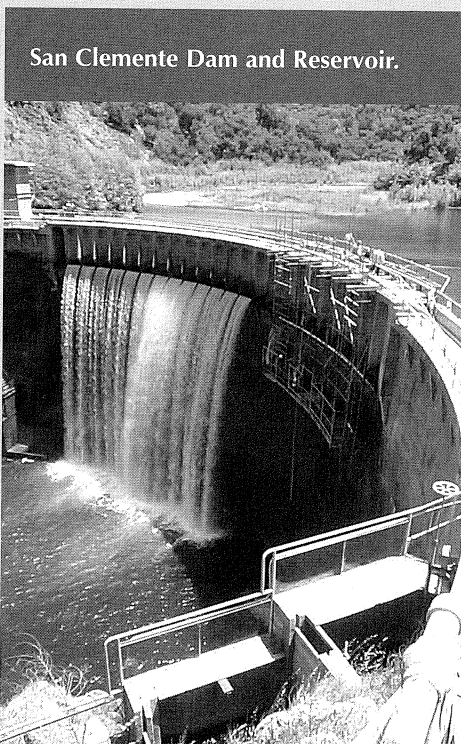
District Pursues Wastewater Recycling

The Wastewater Reclamation Project, begun in 1994 in cooperation with the Carmel Area Wastewater District, the

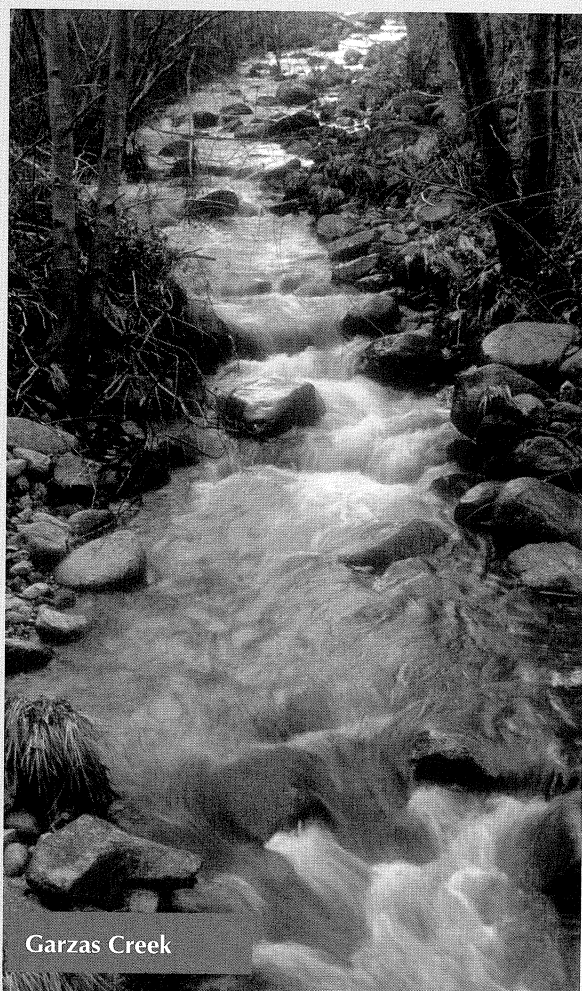
Pebble Beach Community Services District, and the Pebble Beach Company, provides reclaimed wastewater to irrigate golf courses and open spaces in the Del Monte Forest area, including Pebble Beach. The District collected about \$1,400,000 in the Fiscal Year ending June 30, 2003 from the sale of reclaimed water to cover operating expenses and interest on certificates of participation sold to finance the project.

San Clemente Dam and Reservoir Monitored

District staff continued to monitor Cal-Am's operations at San Clemente Dam and the effect of these operations on downstream facilities and habitat. In 2003, at the direction of the California Department of Water Resources' Division of Safety of Dams (DSOD), Cal-Am lowered the water level in San Clemente Reservoir by ten feet to reduce the risk of dam failure in the event of a major earthquake. As a result of this Interim Drawdown Project, increased amounts of sediment were released from San Clemente Dam into the Carmel River below the dam. District staff provided technical advice to DSOD and other resource agencies during planning workshops for this project.



San Clemente Dam and Reservoir.



Garzas Creek

WATER PRODUCTION REPORT, YEAR 2003

District-Wide Production

Production reports for Water Year 2003 indicate that about 19,760 AF were produced from all sources in the District, about 1 percent less than in Water Year 2002. Cal-Am's Monterey Division reported production from all sources in Water Year 2003 was 14,871 AF. Cal-Am is the largest purveyor of water in the District.

There were 696 active wells reporting production, up from 652 in Water Year 2002. Water meters are required for all new wells and for existing wells that produce five or more AF in a year. Ninety-nine percent of the reported water production within the District was metered in Water Year 2003.

District and State Limits

Cal-Am Production

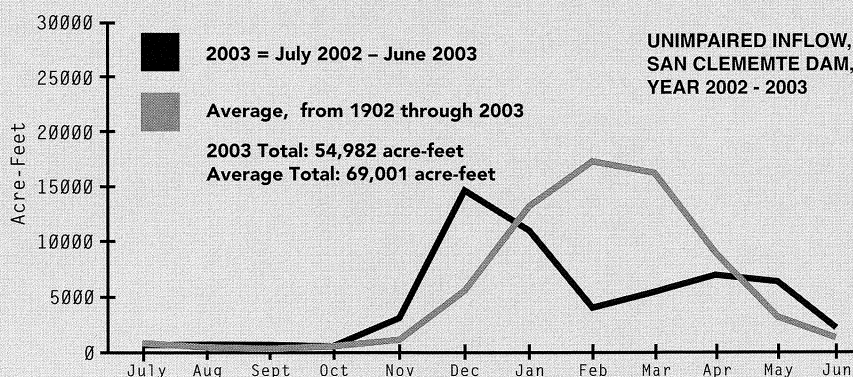
State Water Resources Control Board Order No. 95-10 limits Cal-Am's annual production from the Carmel River Basin to 11,285 AF. Cal-Am produced 11,196 AF of water from the Carmel River Basin in Water Year 2003, 89 AF below the limit. An additional 168 AF of water produced from Cal-Am sources in Carmel Valley were conveyed to the District's aquifer storage and recovery test project in the Seaside Basin. This water was not counted against Cal-Am's production limit.

District Issued Water Permits for New Construction and Remodels

Residential customers planning new construction or remodel projects must obtain a water permit from the District before installing water-using fixtures. All commercial customers must obtain a permit to change usage of water. The District bases permit fees on the potential water use from new fixtures.

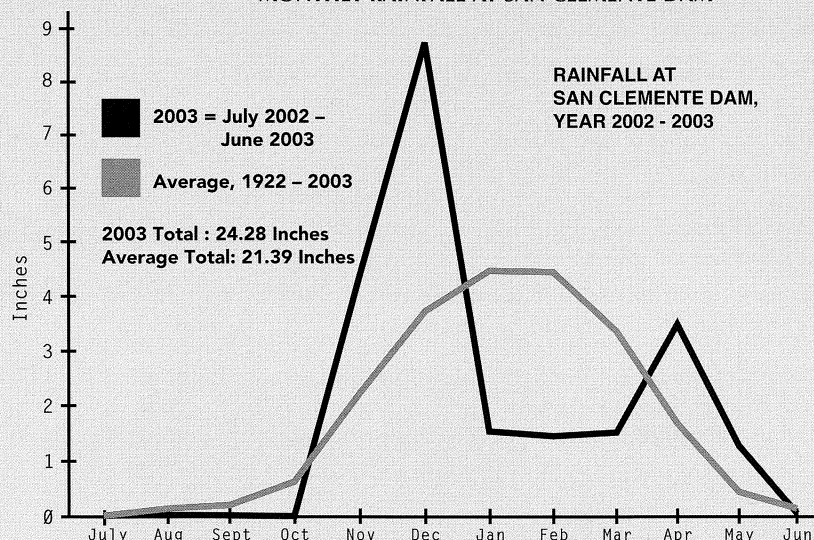
The amount of water used for construction projects is deducted from that jurisdiction's allocation. Most of the water available for new construction and remodel projects derived from the Monterey Peninsula Water Resources System is reserved by jurisdictions for projects awaiting final approval.

MONTHLY UNIMPAIRED INFLOW AT SAN CLEMENTE DAM



In 2003, 54,982 acre-feet of unimpaired inflow was estimated at San Clemente Dam, which is 80% of the average inflow. Unimpaired inflow refers to the flow that would have occurred under natural conditions without any diversions or storage facilities.

MONTHLY RAINFALL AT SAN CLEMENTE DAM

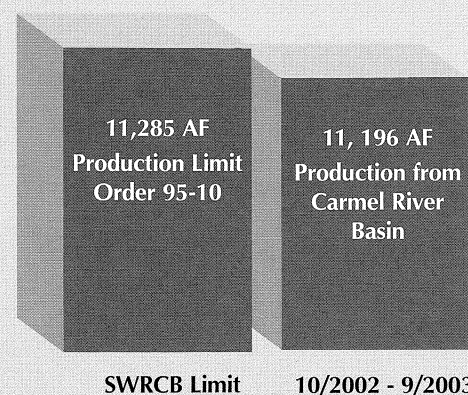


In 2003, 24.28 inches of rainfall were measured at San Clemente Dam, which is 114% of the average annual rainfall.

CAL-AM PRODUCTION FROM CARMEL RIVER BASIN

Cal-Am Production Below State Limits

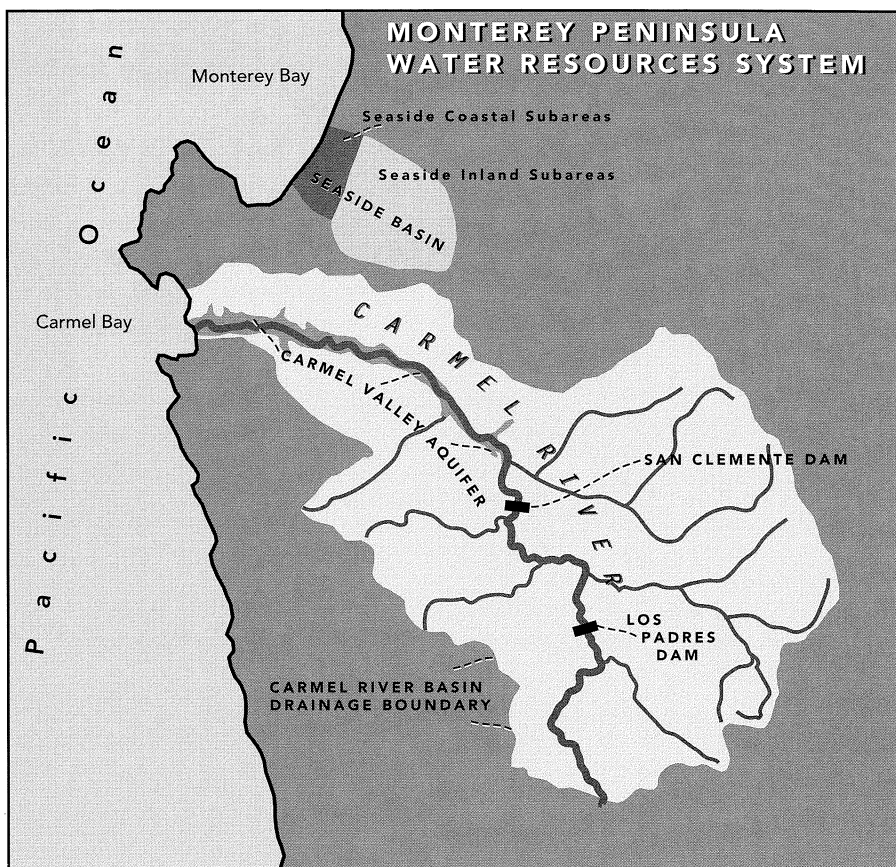
Between October 1, 2002 and September 30, 2003, Cal-Am production from the Carmel River basin totaled 11,196 acre-feet. This is 371 acre-feet below the limit set by Order 95-10. Water production was within approximately 3 percent of the limit.



- A total of 1,195 water permits were issued throughout the District in 2003, an increase of 29% from 2002.
- Approximately 62 AF of water from the 1993 Paralta Well allocation remained available for new construction and remodel projects within the Cal-Am service area as of December 31, 2003, although most of this water has been reserved for projects awaiting final approval. The District permitted the use of 4.232 AF during 2003.
- A total of 50 AF of water remained in the pre-Paralta accounts and 46 AF of public water credits are available as of December 31, 2003, although most of this water is also reserved.

Some Water Permits Issued for New Construction Not Using Cal-Am Water

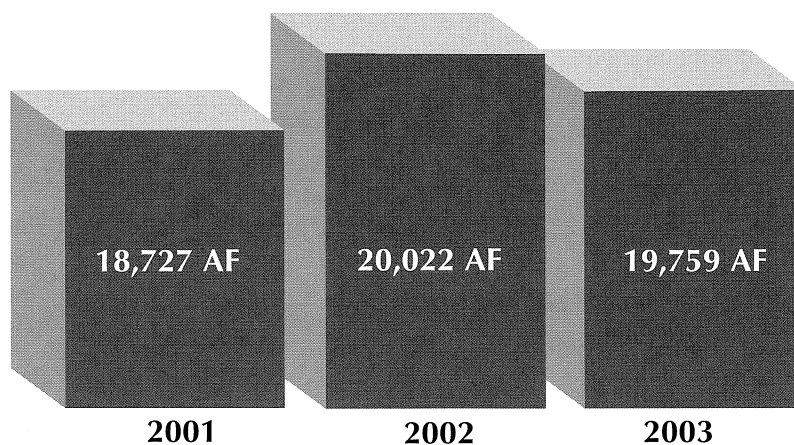
New construction continues in the hillsides of Carmel Valley, and along Highway 68 using water not derived from the Carmel River. Cal-Am does not supply this water, but smaller companies produce the water used in these areas. Water production, therefore, is not subject to SWCRB Order 95-10. The District issued 37 water permits for projects in these areas. Projected annual water use for these projects is approximately 17.006 AF.



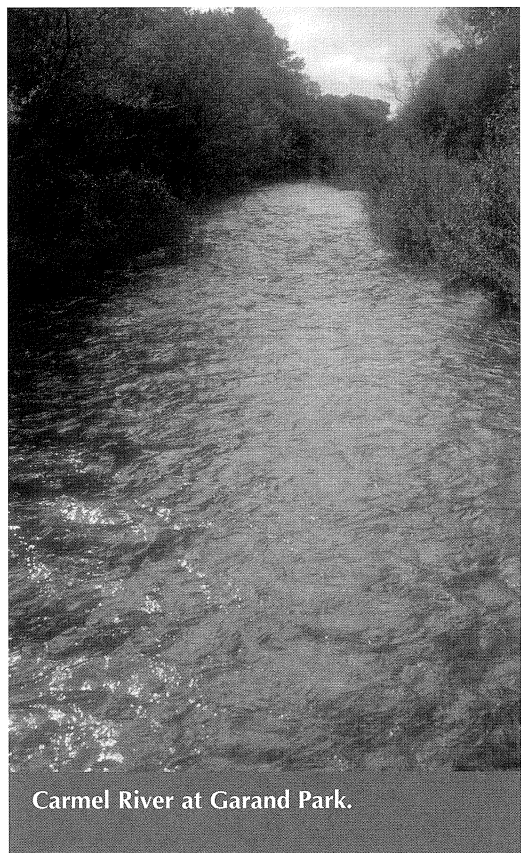
Monterey Peninsula Water Resources System (MPWRS)

The District's Water Allocation Program sets limits for production from within the Monterey Peninsula Water Resources System (MPWRS). The MPWRS consists of the Carmel River, its tributaries, the Carmel River Alluvial Aquifer and the Seaside Coastal Subareas. Cal-Am produced 14,675 AF of water from the MPWRS during Water Year 2003, well below the limit of 17,641 AF imposed by the District's Water Allocation Program.

DISTRICT WATER PRODUCTION 2001-2003



Total water production in the District between October 1, 2002 and September 30, 2003 was 19,562, a 1.3 percent decrease compared with the prior year.



Carmel River at Garand Park.

WATER CONSERVATION

The Monterey Peninsula community remains conscientious about water use. It is regarded as one of the most water-thrifty communities in the state.

Monterey Peninsula Residents Support Conservation

The Expanded Water Conservation and Standby Rationing Plan was adopted by the District and Cal-Am in 1999 to assure:

- Cal-Am water production from the Carmel River remained below the limit set by SWCRB Order 95-10;

- Water reductions are mandated for all water users when a physical water shortage or drought occurs; and

- Mandated procedures are followed when a water supply emergency occurs, whether caused by a natural disaster or breakdown in the water distribution system.

Cal-Am water production remained below the established target for the year which allowed water usage to continue at Stage 1 (the least restrictive stage) throughout 2003.

Conservation Requires Efficient Water Usage

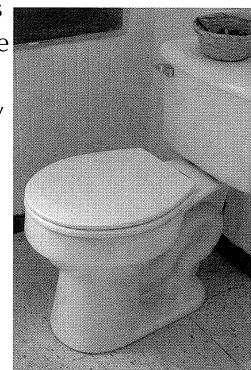
The District Board in 1987 set a goal of 15 percent reduction in water use by the year 2020. This goal requires that toilets be retrofitted and inefficient plumbing fixtures replaced. The water saved is set aside as permanently conserved water.

District and Cal-Am Offer Refunds to Replace Inefficient Toilets

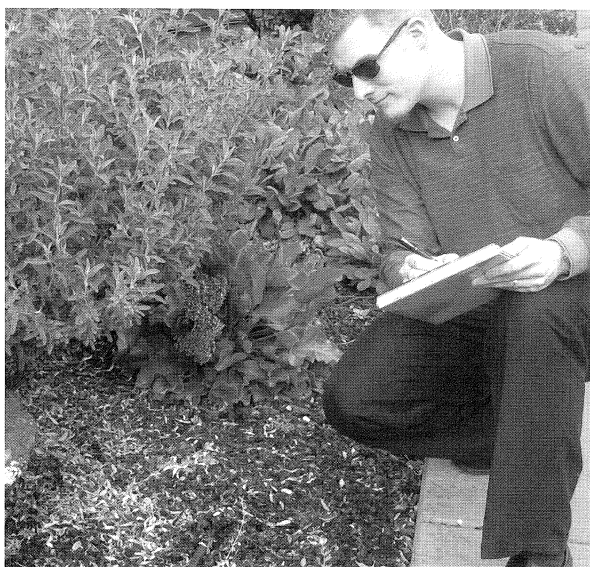
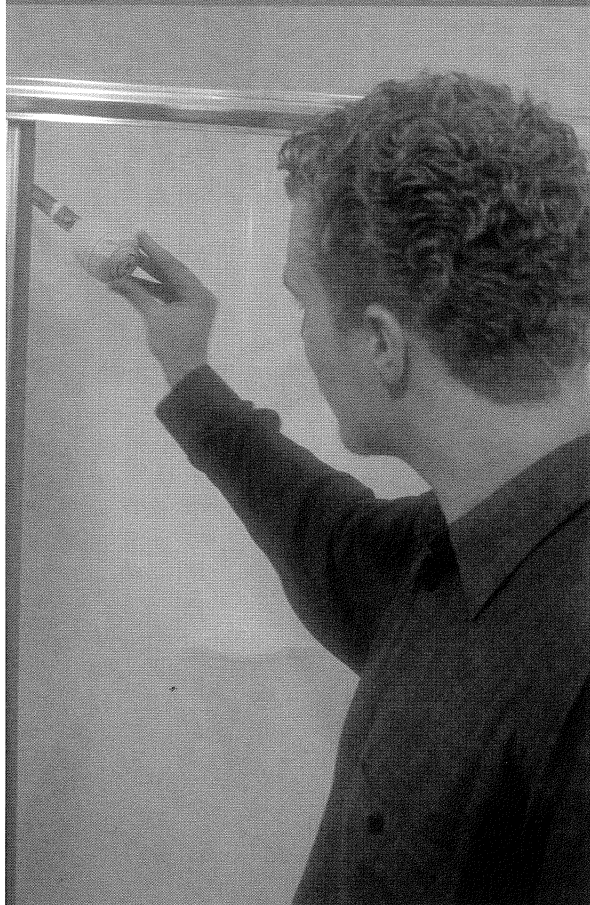
The Toilet Replacement Refund Program refunds up to \$100 for each inefficient toilet replaced with an ultra-low-flush model in a residential or commercial building. Non-visitor serving commercial projects can receive

the refund for up to 20 toilets per property. This program is jointly funded by the District and Cal-Am and administered by the District.

Refunds were issued for 173 toilets replaced in 2003. About 4 AF of water were saved in 2003 by these replacements. The program has saved an estimated 153 AF of water annually since it began in 1997.



Top: Rob Cline, MPWMD, inspects a showerhead in a Pacific Grove apartment building. Bottom: Rob inspects a garden water system, as part of the District's conservation monitoring.



Toilets Retrofitted Upon Resale of Property

Staff inspects properties sold to make sure that inefficient toilets and showerheads are replaced with ultra-low-flush and ultra-low consumption models.

- About 1,801 properties transferred title within the District in 2003. District staff inspected 1,100 of them for compliance with retrofit rules.

- The District estimates that about 18 AF of water were saved through the replacement of about 1,119 toilets under this program in 2003.

Bathroom Ordinance Requires Deed Restrictions to Protect Community Water Usage

"The second bathroom ordinance," (Ordinance No. 98), allows a single-family dwelling on a single-family residential site to add a second full bathroom or make an existing half bath into a full bathroom without debiting the jurisdiction's allocation of water. However, the ordinance requires two deed restrictions:

- (1) Provide public access to water use data for a period of five years before and after the permit is issued; and
- (2) Give notice to future property owners that no water credit is available for



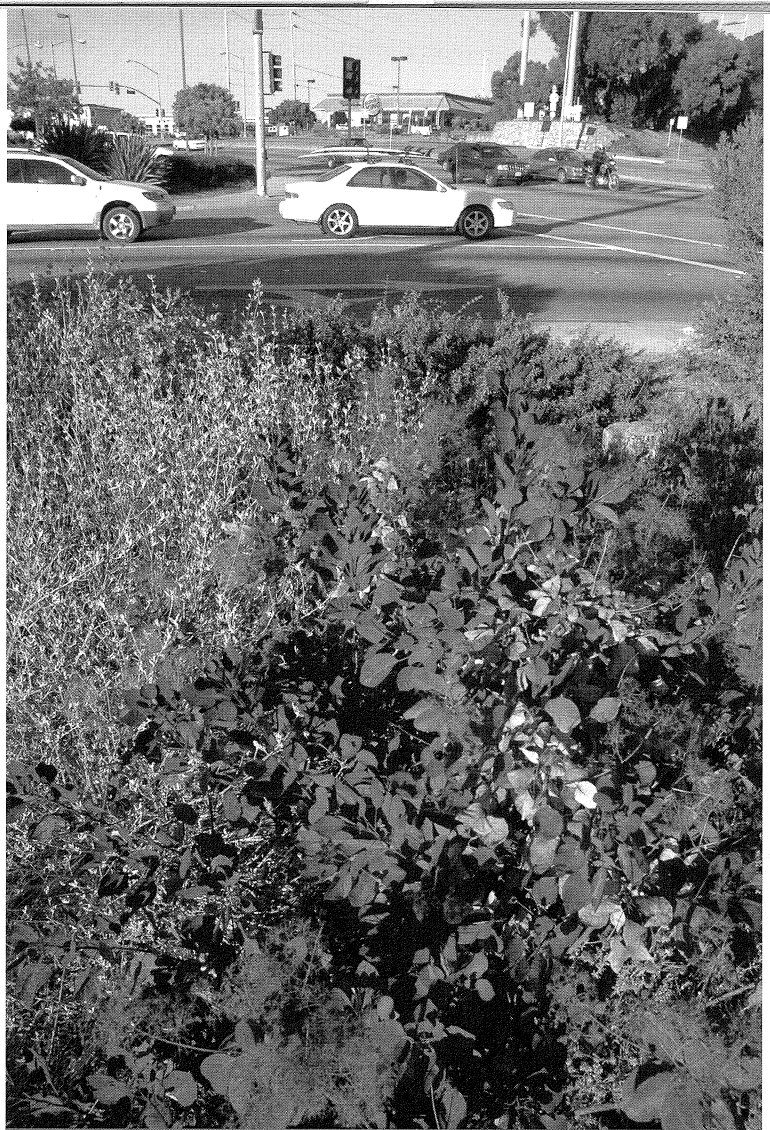
fixtures added pursuant to this ordinance.

In 2003, the District prepared and recorded 445 documents on property titles.

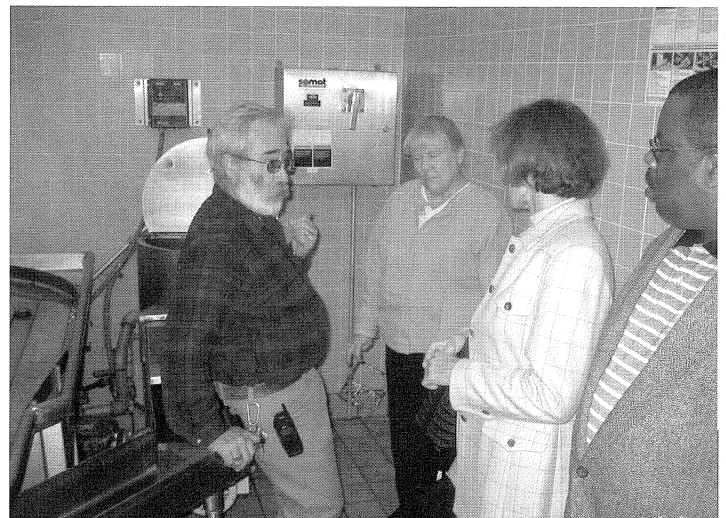
The District Promotes Drought-Tolerant Gardening

The District uses only native and drought-tolerant plants when restoring and maintaining vegetation along the Carmel River. Staff members are knowledgeable about minimizing the need for supplemental irrigation and mimicking natural environments. Throughout the years the District has supported restoration projects by private residents and public entities along the Carmel River.

The District's web site (www.mpwmd.dst.ca.us) contains an extensive list of drought tolerant plants suitable for use within the District's boundaries.



Drought-tolerant gardens, such as this one near an intersection in Seaside, require little water and minimum maintenance. Other examples of such plants are seen in the photos at left.



Dewey Baird of the Presidio of Monterey explains the SOMAT disposal system to Director Lehman, General Manager Farina and Director Edwards. The Presidio of Monterey was granted 7.998 acre-feet of water credits for installing the SOMAT disposal system in the food service facilities at the Defense Language Institute in Monterey.

ENVIRONMENTAL PROTECTION

The protection of the Carmel River and its environs has been one of the District's missions since its inception. The District protects the Carmel River banks against erosion, monitors ground and surface water levels throughout the District, and strictly adheres to federal and state regulations to ensure the protection of threatened species such as steelhead and California red-legged frogs. In Fiscal Year 2002 - 2003, The District allocated approximately 39 percent of its budget toward environmental protection to mitigate for adverse effects of water extractions, which are needed to serve the Community's water demand.

The District Protects Threatened Species

Steelhead Protected in the Carmel River

Although the Carmel River habitat for steelhead has improved significantly over the last 14 years, steelhead continue to be listed as a threatened species in the Carmel River and areas throughout central and south-central California under the Federal Endangered Species Act. Cal-Am, the California Department of Fish and Game, National Oceanic and Atmospheric Administration's National Marine Service Fisheries and District staff carefully coordinate and monitor the amount of water released from reservoirs and pumped from wells to maintain the river flow for fish and other aquatic species.

Steelhead Population Continued to Increase

The Carmel River steelhead population continued to increase in 2003 and to recover from the impacts of the 1987 - 1991 drought. The District's automatic fish counter at San Clemente Dam recorded only 15 fish in 1992. Four hundred eighty-three fish were counted at the San Clemente Dam from December 2002 to May 2003, the fifth highest since the District began counting in 1991.

District staff surveyed the number of juvenile steelhead at 11 stations below Los Padres Dam in October 2003. These included two new stations within the inundation zone of San Clemente Reservoir. Overall population density of juveniles was 100 percent higher than levels recorded in 2002 and averaged 147 fish per one hundred feet of stream. The levels are typical of well-seeded steelhead streams in California.

Sleepy Hollow Steelhead Rearing Facility Retrofitted in April 2003

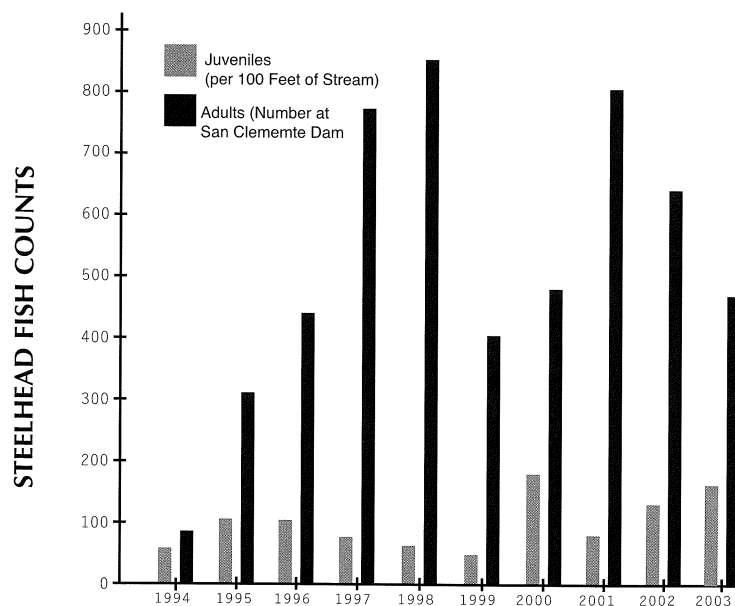
The Sleepy Hollow Steelhead Rearing Facility consists of holding tanks, a rearing channel, and a cooling tower for maintaining a safe water temperature in the facility during the hot summer months. The cooling tower reduces daily maximum and daily mean water temperatures by five to eight degrees Fahrenheit below temperatures in the river. Water temperatures in the river often exceed levels necessary for rearing large numbers of steelhead in

confined spaces. If steelhead juveniles are held at temperatures exceeding about 70 degrees Fahrenheit for long periods, disease organisms can proliferate and spread throughout the population very rapidly. The installation and operation of the cooling tower has reduced this problem substantially. A computer system monitors the power supply and five pumps 24 hours a day. The system automatically alerts District staff to potential problems when the Facility is not staffed.



District team releases rescued steelhead into safer parts of the Carmel River (Pictured: Cory Hamilton and Dave Dettman, MPWMD).

In July 2003 Cal-Am, lowered the San Clemente reservoir to 515 feet elevation during the low-flow season to mitigate for the risk of dam failure during an earthquake. District staff anticipated that this change would draw large quantities



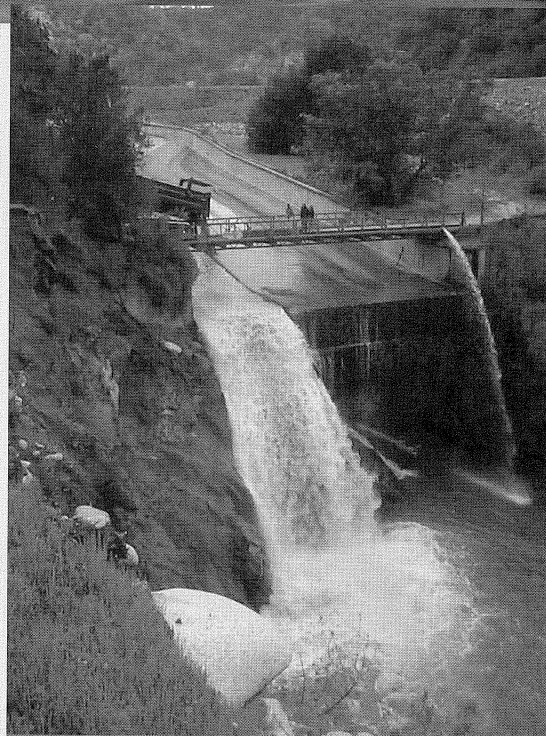
of sand and silt into the facility, especially during fall and early winter storms. Therefore, District staff implemented an Interim Retrofit Project in April 2003. They purchased an additional backup pump and installed upgraded impellers on the river pumps, a mobile emergency pump, and a centrifugal separator to reduce the buildup of sediment in the cooling tower and rearing channel. As of the end of 2003 the new improvements had not been tested because significant quantities of sand and silt had not challenged the equipment.

Over 55,000 Fish Rescued in 2003

District staff captured 39,563 steelhead from the lower Carmel River in 34 rescue operations before the river dried up during the summer months. The Carmel River Steelhead Association rescued another 15,734 fish during 14 rescue operations bringing the total fish rescued in 2003 to 55,297. Of the total rescued, 28,327 fish were stocked at Sleepy Hollow, 26,053 fish were released into viable habitats upstream of the Narrows or into the lagoon, and 917 fish (1.7% of the combined total) died during rescue and transport operations.

Fish Survival Rate at Sleepy Hollow Improved Significantly

The improvements to the rearing facility at Sleepy Hollow contributed to the significant increase in the survival rate of rescued fish reared at Sleepy Hollow. District staff released 12,527 fish (44% of the fish brought to the rearing facility during the 2003 season) between November 6 and December 31, 2003 when the facility was shut down for the season. The cooling tower, protective netting over the rearing channel and the addition of a fish screen to prevent larger fish from entering the channel all contributed to improved conditions for the young fish.



The Spawning Gravel Injection Project . All photos above are of the Los Padres Dam.

Federal and State-funded Projects Completed

During 2003, the District completed the inflow bypass at the San Clemente Creek Reservoir (SCCR) and the spawning gravel injection project, both funded by the California Coastal Salmon Recovery Program:

- SCCR inflow bypass – District staff designed and constructed an intake device and fish screen on the outlet works to control the flow of water released from the dam when the reservoir is filled in the spring and emptied in the fall.

- Spawning Gravel Injection Project – The District purchased and transported 600 tons of 1.5 to 2.5-inch gravel and placed one half of it below Los Padres Dam at the spillway and old fish ladder. The remainder was injected into the Carmel River at Old Carmel Dam, downstream of the San Clemente Dam.

Endangered California Red-legged Frogs Protected and Studied

The District used the latest Geographical Information Systems technology to map the distribution of California red-legged frogs within the Carmel River watershed. District staff monitors and documents the frogs' locations to help understand their spatial distribution.

The Riparian Corridor of the Carmel River Assessed Annually

District staff inspects the Carmel River and its environs every spring and summer to assess the overall condition of the river. The riparian corridor of the Carmel River continues to be healthy and shows signs of natural regrowth. However, vegetation encroachment in areas where the open channel was expanded by the 1998 flood is monitored carefully. Unchecked growth or downed trees can divert flow, cause erosion and ultimately threaten structures. Therefore, the District works with state and federal agencies to remove downed trees, which have the potential to divert flow into open banks and erode stream banks.

District Uses Only Native Vegetation and Minimizes the Need for Irrigation

District staff restores and maintains native vegetation along the Carmel River both to protect against erosion and to enhance the natural habitat. A local nursery propagates the seeds District staff collects from native streamside trees and shrubs. District staff planted 587 willow, cottonwood, sycamore, gooseberry, box elder, buckeye and elderberry seedlings in restoration sites along the Carmel River in 2003.

The District minimizes the need for supplemental irrigation and mimics natural river environments by designing low-lying floodplains adjacent to the river bottom. Since plants are closer to the water table, the need for irrigation is significantly reduced. Also, District staff plants trees such as willows and cottonwoods with a backhoe so that the roots can immediately tap into the water table. The District uses a range of techniques to maintain a healthy, vigorous riparian corridor as efficiently as possible.

Streamside Vegetation Irrigated Only as Necessary

District staff measures leaf and soil moisture during the dry season and monitors the effect of groundwater pumping on the water table. When staff determines that the moisture stress in the riparian vegetation is significant, irrigation is begun to offset the impact associated with groundwater pumping.

Trees planted at District restoration sites had an excellent survival rate during 2003. The height, growth rate and survival of plants at District restoration project sites are documented periodically. Better management practices as well as the close-to-normal or greater flows in the Carmel River over the past nine years (1995-2003) have combined to protect the river environment from significant moisture stress during the dry months.



District staff plants streamside trees with a backhoe for immediate water table access (Pictured: Matt Lyons, MPWMD).

River Channel Cleared of Debris

District staff removed trash and debris, including lumber, plastic, metal and auto tires, from the river channel in 2003.

District's Restoration Projects Create Habitats For Diverse Bird Species

The success of the District's restoration projects is demonstrated by the diversity of species nesting and foraging in the Carmel River riparian habitat. The District's Carmel River Avian Monitoring Program shows that the Carmel River riparian corridor provides an important breeding habitat for a wide variety of species, including the green-backed heron, California quail and Nuttall's woodpecker.

Water Quality Sampling Supplemented with Bioassessment Monitoring

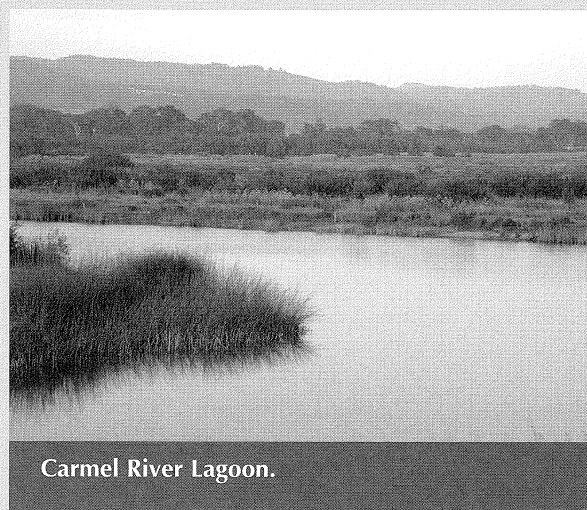
The District supplements its water-quality sampling program with a bio-monitoring program utilizing the State Department of Fish and Game's Stream Bioassessment Procedure. Each fall and spring, samples

of bottom-dwelling animals are collected from five sites on the Carmel River and shipped to a State-approved lab for analysis. Studies in other streams have documented the natural histories of bottom-dwelling animals and their relative tolerances to a variety of environmental disturbances. The abundance of specific bottom-dwelling animals is used to track the condition of the Carmel River.

Carmel River Lagoon Continually Monitored

The Carmel River Lagoon serves as an important rearing habitat for juvenile steelhead while the surrounding wetlands support numerous species of birds and wildlife, including red-legged frogs and southwestern pond turtles.

- District staff maintains a real time water level sensor, which has been recording water levels continuously since 1991;



Carmel River Lagoon.

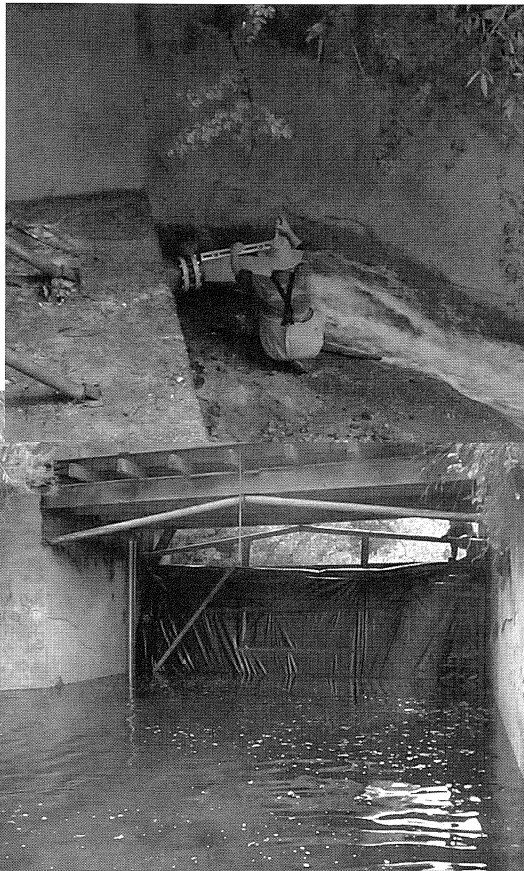
- Twice each month staff measures the water quality of the lagoon;
- Once a year staff checks water quality in nearby wells to guard against seawater intrusion;
- Since 1994, staff has surveyed four cross sections in the lagoon annually; and
- Staff maintains eight transects through the wetlands. Established in 1995, they are used to determine whether or not water management practices in Carmel Valley are affecting the distribution and

composition of vegetation around the lagoon.

Since Cal-Am was ordered to cut back production from Carmel Valley in 1995, the amount of water diverted from the Carmel River has been reduced. Since vegetation monitoring began in 1995, there has also been more favorable hydrologic regime, with only one "below normal" water year (2002) in terms of runoff. Consequently, no vegetation changes that can be attributed to water management practices have been identified to date.

The District participates in multi-agency meetings and provides technical expertise for the following concerns:

- Management of the sand bar at the river mouth during periods of high surf and runoff that can flood nearby residences, and
- A restoration plan for the lagoon wetlands.



Above: Gaging outflow at the new outlet works on San Clemente Creek trout pond dam (Pictured Dave Dettman, MPWMD). Below: New staff plate and intake structure on outlet works at San Clemente Creek trout pond dam.

- District staff tracks water levels in 28 Carmel Valley wells and 21 Seaside wells each month, and
- 28 other wells located throughout the District are monitored less frequently.

Water levels in the Carmel Valley Aquifer fluctuate throughout the year in response to rainfall and runoff, but since 1995 have remained relatively stable from year-to-year due to improved management practices and a more favorable hydrological regime.

Water levels in Seaside have decreased from year-to-year since the State ordered Cal-Am to cut back production from Carmel Valley and maximize production from the Seaside Basin. In 2003, the District intervened in a lawsuit to adjudicate water rights in the Seaside Basin.

Monitoring Surface Streamflow and Surface Water Quality

District staff maintained four streamflow monitoring stations on the Carmel River and nine stations on the major tributaries that flow into it. In addition, two streamflow stations were maintained at tributary sites outside the Carmel River Basin. This critical information is used to project and manage streamflow releases at Cal-Am dams and as an indicator of stream health.

In 2003, District staff maintained seven water temperature-recording stations and measured water quality parameters at three sites along the Carmel River. This information is used to assess the suitability of habitats for steelhead, red-legged frogs and other aquatic species and to manage the thermal regime of the river with releases at Los Padres Dam.

Water Quality Monitored in Carmel Valley and Seaside Wells

District staff monitors water quality in 17 wells in the Carmel Valley Alluvial Aquifer (since 1981) and 12 wells in the Seaside Basin (since 1990). Samples are shipped to the Monterey County

Consolidated Chemistry Lab where they are tested for 15 chemical constituents. District staff is particularly interested in early detection of potentially elevated nitrate concentrations in upper Carmel Valley and seawater intrusion in coastal wells. As of the end of 2003, nitrate levels were far below the State drinking water standard and there was no evidence of seawater intrusion.

Collection of water quality field parameters at a private production well in the District (pictured: Joe Oliver, MPWMD).



Ground Water Levels Monitored in Carmel River and Seaside Basins

District staff has monitored ground water levels and calculated storage capacity in the Carmel River and Seaside Basins since 1987:

FINANCIAL REPORT

FISCAL YEAR 2002-2003

REVENUES **\$4,004,670**

User Fees	\$1,848,572
Connection Charges	\$456,233
Property Taxes	\$936,689
Other Fees/Reimbursements	\$569,127
Investment Income	\$101,865
Grants	\$92,184



User Fees - Paid by California American Water and Seaside Municipal water system customers and appear on water bills as "MPWMD Fee." Currently, the rate is 7.125% of the water bill.

Connection Charge - A capacity charge paid when a water permit is obtained. The 2003 charge was \$20,415 per acre-foot of water. Collections for the fiscal year were \$456,233.

Property Taxes - The District receives 0.26% of the property revenues collected by the County.

Other Fees/Reimbursements - Includes water and well permit processing charges, fees for staff research and photocopying and reimbursements for various projects and the Toilet Replacement Refund Program.

Investment Income - Earnings on assets paid by banks and investment firms.

Grants - Reimbursements to the District from outside agencies.

EXPENDITURES **\$4,451,572**

Carmel River Mitigations	\$1,721,951
Water Augmentation	\$2,337,575
Water Conservation	\$392,046



Carmel River Mitigations - Fishery, vegetative, erosion control, water resources monitoring and other projects to offset damage resulting from water extractions along the Carmel River.

Water Augmentation - Includes research, environmental studies and other activities related to development of water supply projects.

Water Conservation - Supports conservation education, toilet retrofit program and water permit compliance activities.

The difference between revenues and expenditures, in the amount of \$446,902, was funded from reserves. These reserves were set aside in previous years to be used on projects such as those the District is currently pursuing. Total funds available for this purpose as of June 30, 2003 was \$3,106,173.

Fish ladder at San Clemente Dam.

Plans for Future Capital Improvements and for Maintenance and Operation of Those Improvements:

The District is not a potable water purveyor. Water supplies are provided by public utilities, mutual water companies and privately owned wells. The District began selling reclaimed water in 1994 from the Carmel Area Wastewater District (CAWD)/ Pebble Beach Community Services District (PBCSD) Wastewater Reclamation Project. CAWD/PBCSD plans to expand storage capacity by utilization of the Forest Lake Reservoir in the Del Monte Forest. The reclamation expansion plan, which includes desalination facilities, has been presented to the District. During 2003, negotiations on how to fund the project were underway.

An Operation and Maintenance Reserve Fund exists to help pay for routine as well as extraordinary repairs and replacement. The reserve was \$294,630 on June 30, 2003. The reclamation project also has a Replacement and Renovation Fund that contained \$224,304 on June 30, 2003. The annual accrual in this fund of \$5,300 is sized to achieve a fund balance of \$1,000,000 in 2022, assuming 6 percent annual interest.

Aside from the wastewater reclamation

project, the District continues to evaluate a range of other capital improvements.

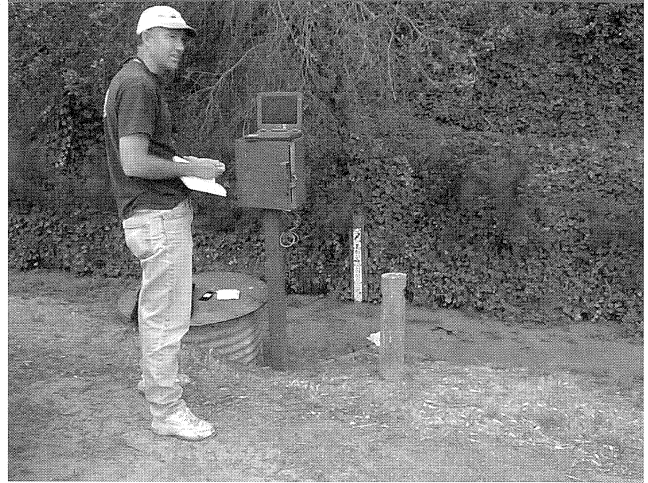
Methods for Financing Capital Improvements:

The District continues to evaluate various means of financing water supply projects. At such time as the District Board defines specific projects for the agency to pursue, staff will consider which of the various funding mechanisms permitted in its authorizing legislation (State of California Water Code Section 118 et. seq.), is most appropriate.

Financial Analysis of the Water Utility Systems Operated by the District

The District currently does not operate any water utility systems for which a financial analysis could be conducted. The only financial involvement of the District in water utility systems centers on the reclamation project that is operated by the CAWD. The audited financial statements for the CAWD/PBCSD

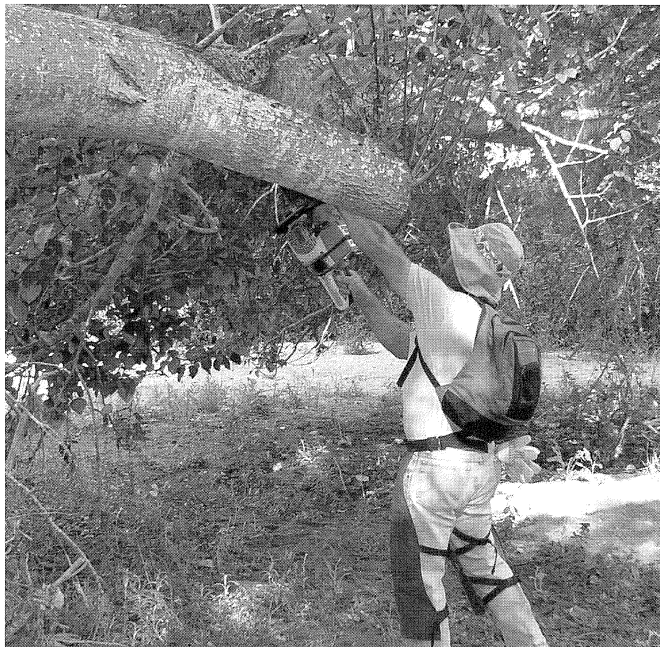
District staff downloading water level data at one of the District's fifteen continuous recording streamflow gaging stations (Pictured: Greg James, MPWMD).



Wastewater Reclamation Project for the year ending June 30, 2003 are available for inspection at the District office.

Ground Water Zones

In January 1980, the District Board initiated the formation of a District wide groundwater charge zone by adopting Resolution No. 80-2. The District found in the resolution that it was not the intent of the District to use the groundwater charge zone to raise revenues, but as a mechanism to trigger the powers in the District law regarding well registration, metering and reporting.



District staff trims riverside vegetation (Pictured: Mark Bekker, MPWMD).



Steelhead rescue operation.



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